

### **Amendments to the Claims:**

This listing of claims replaces all prior versions and listings of claims in the application:

### **Listing of Claims:**

**1. (Currently Amended)** An optical coupler comprising:

a housing with a rotatable distal face and a stationary proximal face, the distal face having an eccentric port and a central port;

a lens disposed inside the housing to intercept a rotating collection beam emerging from the eccentric port and to re-direct the collection beam to a focus proximal to the lens as the collection beam rotates; and

a beam re-director disposed between the lens and the distal face, the beam re-director being oriented to direct a delivery beam toward the central port.

2. **(Original)** The optical coupler of claim 1, further comprising a light source disposed to direct a delivery beam radially inward to the beam re-director.
3. **(Original)** The optical coupler of claim 1, wherein the beam re-director comprises a penta-prism.
4. **(Original)** The optical coupler of claim 1, wherein the beam re-director comprises a prism.
5. **(Original)** The optical coupler of claim 1, wherein the beam re-director comprises a mirror.
6. **(Original)** The optical coupler of claim 1, further comprising a detector disposed at the focus for receiving the rotating collection beam.

7. **(Original)** The optical coupler of claim 1, wherein the lens is configured to focus the collection beam on an axis of rotation of the distal face.
8. **(Original)** The optical coupler of claim 1, wherein the lens is configured to focus the collection beam off an axis of rotation of the distal face.
9. **(Original)** The optical coupler of claim 1, wherein the lens comprises an axicon lens.
10. **(Currently Amended)** A system for identifying vulnerable plaque, the system comprising:
  - a rotating catheter having a collection fiber and a delivery fiber extending therethrough;
  - a housing with a rotatable distal face and a stationary proximal face, the distal face having an eccentric port and a central port ;
  - a lens disposed inside the housing to intercept a rotating collection beam emerging from the eccentric port and to re-direct the collection beam to a focus proximal to the lens as the collection beam rotates; and
  - a beam re-director disposed between the lens and the distal face, the beam re-director being oriented to direct a delivery beam toward the central port.
11. **(Original)** The system of claim 10, further comprising a light source disposed to direct a delivery beam radially inward to the beam re-director.
12. **(Original)** The system of claim 10, wherein the beam re-director comprises a penta-prism.
13. **(Original)** The system of claim 10, wherein the beam re-director comprises a prism.
14. **(Original)** The system of claim 10, wherein the beam re-director comprises a mirror.

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15. (Original) The system of claim 10, further comprising a detector disposed at the focus for receiving the rotating collection beam.

E 16. (Original) The system of claim 10, wherein the lens comprises an axicon lens.  
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